

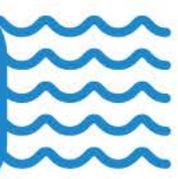


NYSERDA

New York State Offshore Wind

Wednesday, September 26 | Long Beach
Thursday, September 27 | Rockaways

New York Clean Energy Standard


50%
 **renewable
energy by**
2030 

New York State will commit to building:

**2,400 megawatts of offshore
wind power by 2030, which will
generate enough power for
up to 1.2 million homes.**



January
2018



Offshore Wind Master Plan

- Roadmap for advancing the development of offshore wind in a **cost-effective** and **responsible** manner
 - Identifies the most favorable areas for potential offshore wind energy development
 - Describes the economic and environmental benefits of offshore wind energy development
 - Addresses mechanisms to procure offshore wind energy at the lowest ratepayer cost
 - Analyzes costs and cost-reduction pathways
 - Recommends measures to mitigate potential impacts of offshore wind energy development
 - Identifies infrastructure requirements and assesses existing facilities
 - Identifies workforce opportunities

NEW YORK STATE OFFSHORE WIND MASTER PLAN

Charting a Course to 2,400 Megawatts
of Offshore Wind Energy

Master Plan Supporting Studies and Surveys

- Marine Wildlife Survey
- Analysis of Multibeam Echo Sounder and Benthic Survey
- Birds and Bats
- Environmental Sensitivity Analysis
- Fish and Fisheries
- Marine Mammals and Sea Turtles
- Preliminary Wind Resource Assessment
- Sand and Gravel Resources
- Consideration of Potential Cumulative Effects

Environmental



- Aviation and Radar Assets
- Health and Safety
- Shipping and Navigation
- Cultural Resources
- Cable Landfall Permitting
- Marine Recreational Uses
- Visual Threshold Study

Social and Regulatory



- Pipelines, Cable, and Other Infrastructure
- Ports and Supply Chain
- Workforce Opportunities in New York
- Jones Act Compliant Vessels
- Project Cost Projections
- Offshore Wind Injection Assessment

Economic and Infrastructure



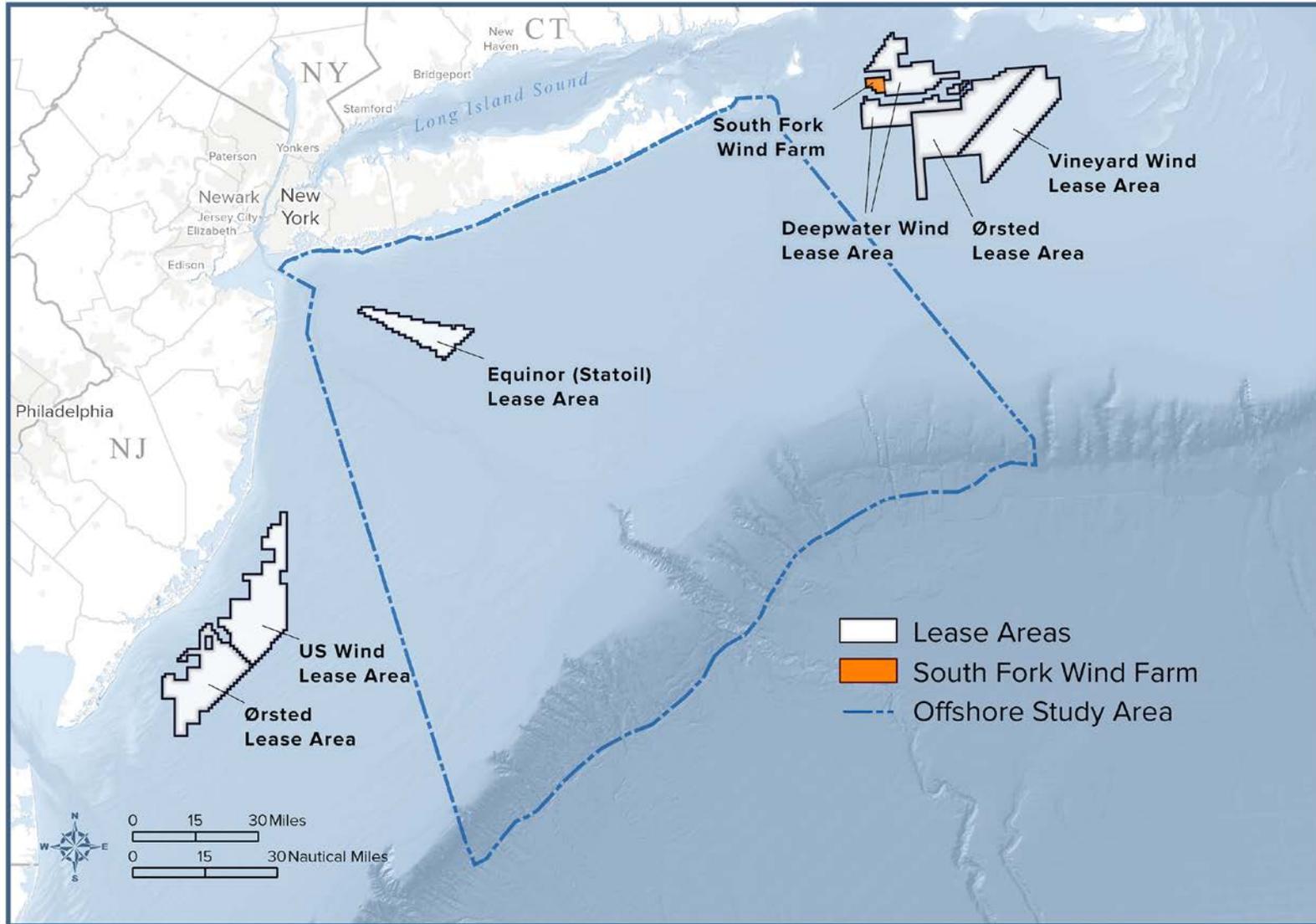
Presentation Outline

Activities since the release of the Master Plan:

1. Responsible Siting and Area Identification
2. Offshore Wind Standard and Upcoming RFP
3. Ongoing Outreach and Public Engagement
4. Studies and Research to Reduce Cost and Risk
5. Upcoming Events

Responsible Siting and Area Identification

Regional Context

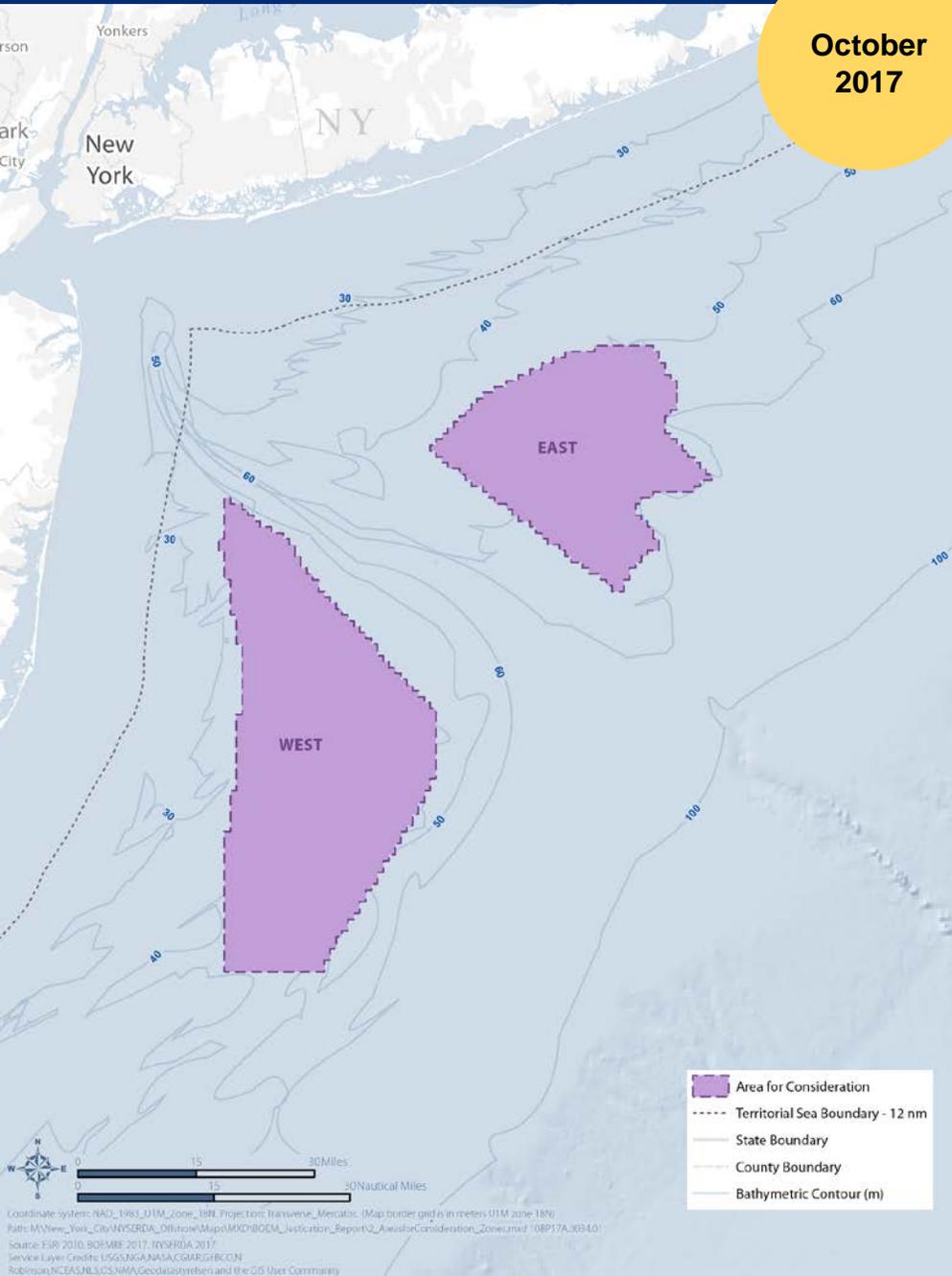


The federal Department of Interior's Bureau of Ocean Energy Management (BOEM) regulates renewable offshore wind energy development in federal waters, which begin three nautical miles (approximately 3.5 miles) from the coast

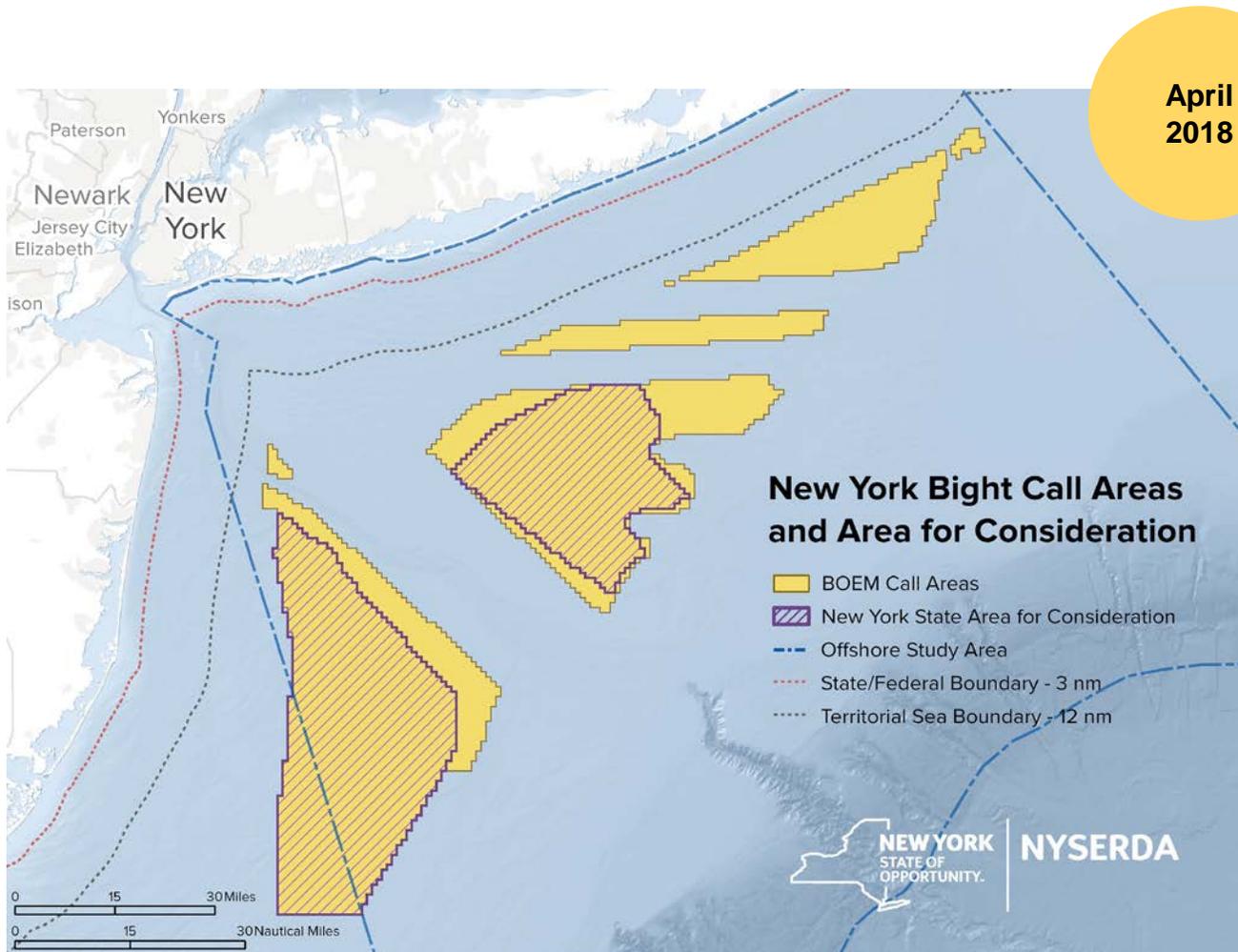
October
2017

Area for Consideration

- New York State requested BOEM to identify and lease at least four new Wind Energy Areas within the Area, each capable of supporting at least 800 MW of offshore wind energy
- Refined from the original offshore study area to account for:
 - Visibility
 - Wake effects
 - Historic properties
 - Construction costs
 - Navigational concerns
 - Interconnection feasibility
 - Submarine cable costs and fishery concerns
 - Fishing industry concerns
 - Marine mammal impacts



BOEM Call Areas and NYS Area for Consideration

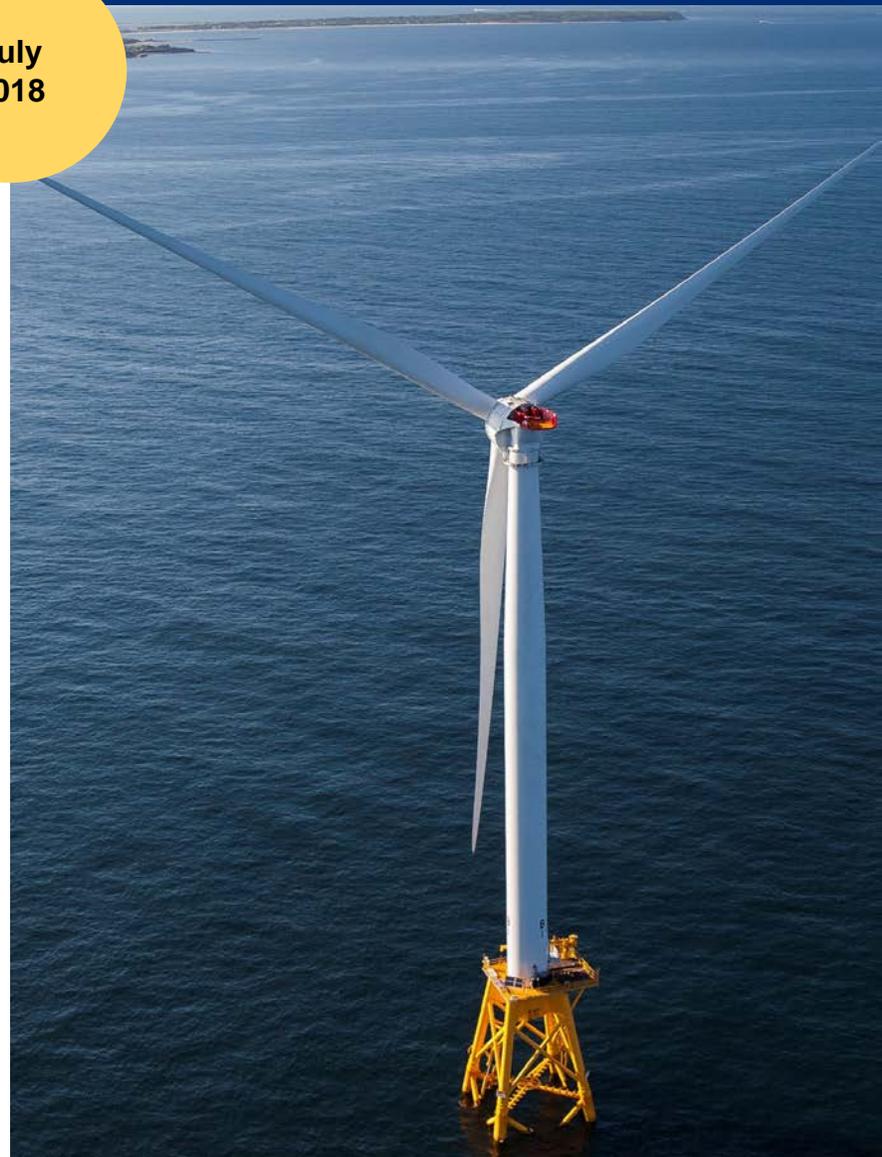


- BOEM published a Call for Information and Nominations allowing stakeholders provide feedback on the potential for development of new wind energy areas in the New York Bight
- Geographic areas included in the Call Area fall outside of New York's recommended Area for Consideration

NYS Comments to BOEM

July
2018

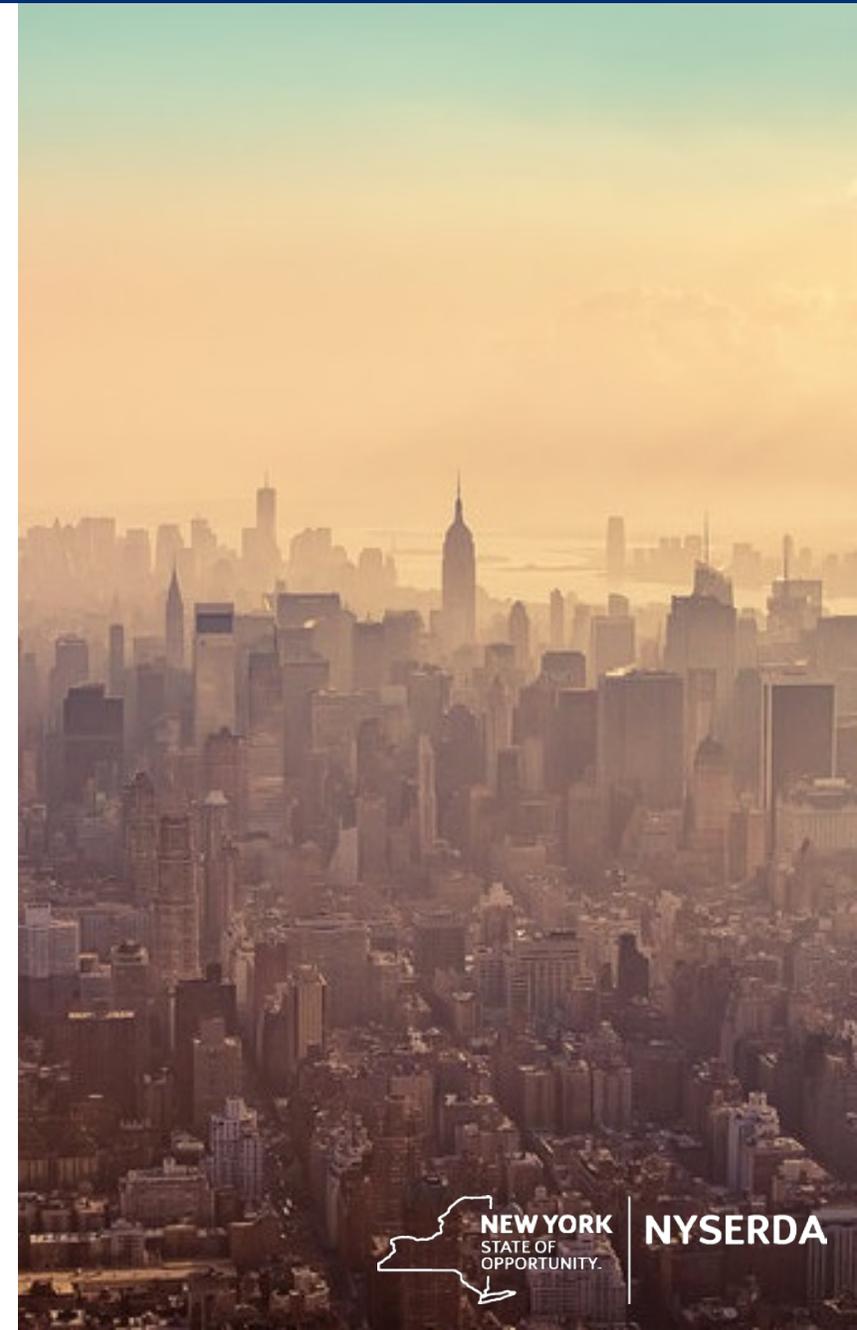
- New York State submitted comments to BOEM in response to the Call for Information and Nominations
- Reaffirms the State's identification of the Area for Consideration as the most optimal area to develop offshore wind as it:
 - Presents the fewest conflicts with ocean users, resources, infrastructure, and wildlife
 - Has the greatest potential for the cost-effective development of offshore wind energy to meet the State's renewable energy goals
- Available online:
https://www.governor.ny.gov/sites/governor.ny.gov/files/atoms/files/NYS_BOEM_NY_Bight_Call_Comments.pdf



Offshore Wind Standard and Upcoming RFP

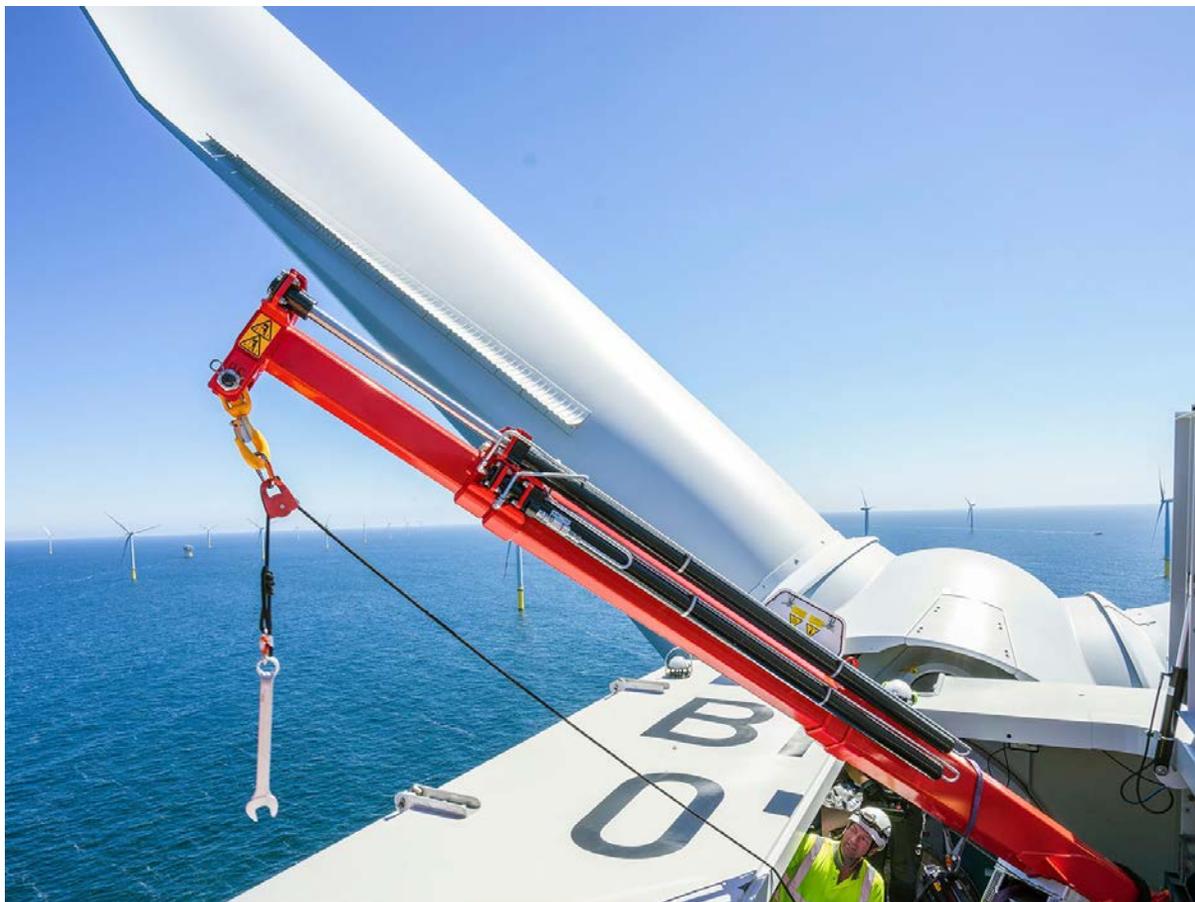
Environmental Benefits

- New York achieving its 2,400 MW offshore wind energy goal by 2030 would result in a number of significant environmental benefits
 - Greenhouse gas emissions
 - Reduced by more than five million short tons – the equivalent of removing about 1 million cars from the road
 - Would result in approximately \$1.9 billion in benefits
 - Improved air quality
 - Avoid more than 1,800 tons of NO_x, 780 tons of SO₂, and 180 tons of PM2.5
 - Over 20 years would provide over \$1 billion in health benefits and avoid more than 100 premature deaths



Jobs and Infrastructure Benefits

The Workforce Opportunity of Offshore Wind in New York study found that the State could benefit from more than \$6 billion of investments and approximately 5,000 new jobs in installation, operations and maintenance, and manufacturing



January
2018

Offshore Wind Policy Options Paper

- Provides an assessment of alternatives for addressing a wide range of policy issues relevant to the successful deployment of a first phase (800 MW) of offshore wind energy
- Components include:
 - Procurement and contracting
 - Seven options for contract structures
 - Schedule of future procurements
 - Methods to ensure ratepayer protection
 - Funding mechanisms through load serving entity obligations
 - Transmission and interconnection strategies
 - Cost and benefit analysis



Offshore Wind Standard

July
2018

- The Public Service Commission issued an Order directing NYSERDA, in consultation with NYPA and LIPA, to procure approximately 800 MW of offshore wind between 2018 and 2019
 - Public Service Commission Case **18-E-0071**
- Authorized NYSERDA to include certain provisions in its Request for Proposals (RFP) including:
 - Commitments to project labor agreements and prevailing wages as contract requirements
 - Provisions to ensure that awarded offshore wind projects consider the interests of ocean users such as
 - Commercial and recreational fishing
 - Environmental stakeholders
 - Coastal communities



Request for Information (RFI OSW-2018)

- Issued in response to the Offshore Wind Standard to gather feedback from developers and other interested parties on the mechanics of NYSERDA's first offshore wind RFP
- Responses from a variety of stakeholders including:
 - Utilities
 - Project developers
 - Labor representatives
 - Government agencies
 - Community organizations
 - Commercial fishing industry
 - Environmental organizations
- Available online:

<https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Offshore-Wind-Solicitations/Generators-and-Developers/Request-for-Information>

August 10, 2018

Long Island Commercial Fishing Association
P.O. Box 191, Montauk, NY, 11954

CLIMATE JOBS NY

NYOffshore Wind Alliance
118 Washington Avenue, Suite 10
Albany, NY 12210
518.682.1465
www.nyoffshorewind.org

NEW YORK STATE OF OPPORTUNITY | NYSERDA

Offshore Wind Renewable Energy Credits
Request for Information OSW-2018

Comments Due: August 10, 2018 by 5:00 p.m. Eastern Time*

The purpose of this Request for Information (RFI) is to acquire feedback that will assist the New York State Energy Research and Development Authority (NYSERDA) in developing a Request for Proposals (RFP) for Offshore Wind Renewable Energy Credits (ORECs) pursuant to the New York State Public Service Commission (PSC) Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement issued in Case No. 18-E-0071 and dated July 12, 2018.

26 sets of comments

27 Cortland Circle
Albany, NY 12203-6399

NYSERDA will hold a technical conference on Monday, July 23 from 1:00 to 4:00 p.m. ET to discuss topics related to the solicitation process and this RFI at the Department of Public Service's New York City office (90 Church Street) and via webinar.

- If you wish to participate in person, you must RSVP to offshorewind@nyserda.ny.gov no later than 5:00 p.m. ET on Friday, July 20.
- If you plan to participate via webinar, please [register online](#).

Confirmation of in person registration and/or webinar access will be emailed to participants following receipt of RSVP or registration.

If you have technical questions regarding this RFI, please contact offshorewind@nyserda.ny.gov.

- 1 -

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Clean Energy provided by to achieving

August 2018

NEW YORK STATE OF OPPORTUNITY. | NYSERDA

Draft Request for Proposals (RFP)

The draft RFP is the manifestation of the work done for the Master Plan, Policy Options Paper, collaboration with State and federal agencies, and extensive public and stakeholder consultations

Scoring Criteria

- **70% Bid Price**
 - Index and Fixed OREC offer prices
- **20% Economic Benefits**
 - Project-specific spending and job creation
 - Investments in offshore wind-related supply chain and infrastructure development
 - Opportunities for New York offshore wind supply chain, workforce, and research and development
- **10% Project Viability**
 - Project development plans are sufficiently mature and technically and logistically feasible
 - Proposers have sufficient experience, expertise, and financial resources
 - Project can be developed in a manner sensitive to ocean users and coastal communities

Contract Requirements

- Project labor agreement and prevailing wage requirement
- Submit a fisheries and environmental mitigation plan
- Participate in New York's technical working groups (TWGs)
- Consult with relevant State agencies around fishing, wildlife, and the environment
- Implement lighting controls to minimize nighttime visibility
- Make environmental data collected during site assessment publicly available
- Minimize visual impacts

Draft Request for Proposals Issued (Draft ORECRFP18-1)

- NYSERDA issued a draft Request for Proposals (RFP) to help inform and refine the final RFP
 - Available for stakeholder comment
 - Submit to offshorewind@nyserda.ny.gov by **Friday, October 5, 2018 at 5:00 p.m. ET** with the subject “Draft ORECRFP18-1 Comments”
 - Available online:
 - <https://www.nyserda.ny.gov/offshore-wind-draft-request-for-proposals>
- Next Steps:
 - Fall 2018: Final RFP issued
 - Winter 2019: RFP due
 - Spring 2019: NYSERDA notifies awardees
 - Summer 2019: Contract executed

DRAFT / All Contents Subject to Further Deliberation and Final Decision



NEW YORK
STATE OF OPPORTUNITY.



NYSERDA

**Purchase of Offshore Wind Renewable Energy Certificates
Draft Request for Proposals
(RFP) No. ORECRFP18-1
RFP Release Date: TBD**

NOTICE: This draft ORECRFP18-1 is being issued by NYSERDA in order to allow review and comment by interested parties prior to the issuance of a formal Request for Proposals (RFP). Comments are due by Friday, October 5, 2018, and should be sent to offshorewind@nyserda.ny.gov with the subject line “Draft ORECRFP18-1 Comments” Please note that all content in this DRAFT RFP and its attachments, appendices and exhibits is subject to revision. The content provided herein is subject to deletion or modification based on comments submitted by prospective Proposers, other entities or persons electing to respond to this DRAFT RFP, or for any other reason. Proposers should review the final RFP before preparing a Proposal.

NYSERDA does not intend to make comments public. If NYSERDA receives a request from a third party for comments received that have been marked “Confidential” or “Proprietary,” NYSERDA will process such request under the procedures provided by NYSERDA’s FOIL regulations (email foil@nyserda.ny.gov for additional information). See Section 8.1.

The New York State Energy Research and Development Authority (NYSERDA) seeks to procure Offshore Wind Renewable Energy Certificates (“ORECs”)¹ as authorized by the New York State Public Service Commission’s [Order Establishing Offshore Wind Standard and Framework for Phase 1 Procurement](#), issued on July 12, 2018 in Case No. 18-E-0071. All Proposers are advised to review the Order and its Appendices before participating in this RFP.

Proposals are due on TBD by 3:00 p.m. ET.

Proposals must be held firm and valid for 180 days from TBD.

All relevant documents pertaining to this RFP are on available on the NYSERDA website at <https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Offshore-Wind-Solicitations/Generators-and-Developers>. Proposers are advised to check this website regularly for updates.

Questions about this RFP should be directed to Doreen Harris, Adrienne Downey, Allison Rose, or Matt Vestal (the Designated Contacts) at offshorewind@nyserda.ny.gov (no phone calls). A Proposers Conference will be held on [TBD]. No communication intended to influence this procurement is permitted except by contacting the Designated Contacts through this email address. Contacting _____

¹ Please note that while the Order uses the generic term “credits,” the term “certificates” is used throughout the RFP. Successful proposers will be required to participate in NYGATS, and NYGATS uses the term “credits.” Certificates are minted on a one per MWh basis. Each NYGATS OREC Certificate will include a unique identification number.



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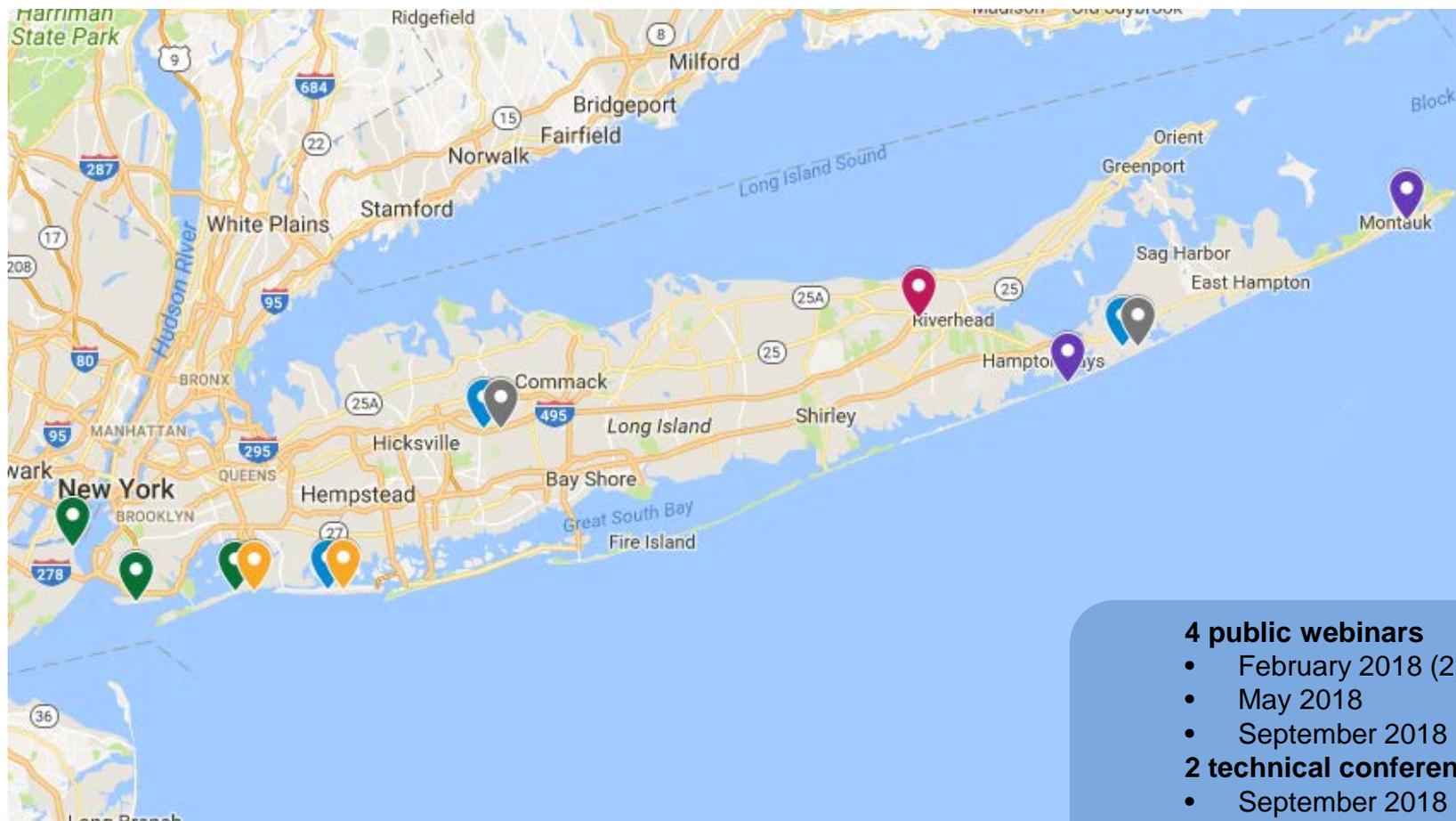


NYSERDA

**September
2018**

Ongoing Outreach and Public Engagement

Public Engagement



New York State continues to host public quarterly webinars and open house events in New York City and Long Island

LI Public Meetings, July 2017

-  Melville
-  Long Beach
-  Southampton

NYC Public Meetings, August 2017

-  Rockaway Beach
-  Staten Island
-  Brooklyn

Fishing Open Houses, August 2017

-  Southampton
-  Montauk

Master Plan Update, October 2017

-  Riverhead

LI Public Meetings, May 2018

-  Melville
-  Southampton

LI/NYC Public Meetings, September 2018

-  Rockaway Beach
-  Long Beach

Stakeholder Outreach

- New York State is remaining actively engaged with a wide array of interested stakeholder parties including:
 - Commercial and recreational fishermen
 - Consumer advocates
 - Elected officials
 - Labor and business
 - Long Island and New York City communities
 - Non-governmental organizations
 - Offshore wind energy industry
 - State and federal agencies
 - Submarine cables and offshore infrastructure owners





Led by
NYS
Department of
Environmental
Conservation

Commercial and Recreational Fishing Technical Working Group

- Comprised of fishing organizations and offshore wind developers; supported by State and federal regulators and regional states
- Will provide advice and guidance while protecting the State and region's valuable fisheries and fishing communities by:
 - Developing best management practices to avoid, minimize or offset potential impacts to fish and fisheries
 - *Synthesis currently underway*
 - Identifying and supporting key fish/fishing and offshore wind related studies and research needs
 - *New research solicitation planned for release this fall*
 - Developing a framework for understanding impacts to fishing and mitigation of these impacts
 - *Fishing Mitigation Plans required in the procurement*
 - *Developers required to consult with State on federal permitting*
- Hiring a State Fisheries Liaison

An aerial photograph of a whale breaching the dark blue ocean surface, creating a white splash and a trail of white water. The whale's back and tail are visible above the water.

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NYSERDA

Environmental Technical Working Group

- Comprised of eNGO's and offshore wind developers; supported by State and federal regulators and regional states
- Advising the State regarding the environmentally responsible development of New York's offshore wind energy resources by:
 - Developing a transparent process for identifying and addressing priority issues relating to wildlife monitoring and mitigation
 - *Synthesis of best management practices underway*
 - *Environmental Mitigation Plans required in the procurement*
 - Reducing permitting risk and uncertainty by improving clarity in expectations and processes for wildlife monitoring and mitigation
 - *Developers required to consult with State on federal permitting*
 - *Developers required to release environmental data after collection*
 - Improving understanding of potential effects of offshore wind energy development on wildlife
 - *New research solicitation planned for release this fall*

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Department of
State

Maritime Technical Working Group

- Focusing on developing best management practices
 - Engaging members of the maritime industry
 - Pilots
 - Tug/barge operators
 - Others
 - Coordinating with State and federal agencies
 - Port Authority of New York and New Jersey
 - Department of Environmental Conservation
 - Department of Public Service
 - U.S. Coast Guard
 - BOEM
 - Soliciting input from offshore wind developers
- Committed to smart development
 - New ideas, lessons learned from Europe

Economic and Infrastructure Opportunities for New York

Workforce



Ports



Vessels



Suppliers



NEW YORK
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NYSERDA

Jobs and Supply Chain Technical Working Group

- Connecting the local supply chain to the global offshore wind industry and original equipment manufacturers
 - *Supply Chain Database currently being created*
 - *New York Offshore Wind Supplier Forum being held in November*
- Advising as to the use of \$5 million to support infrastructure advancement
 - *Evaluating cost and feasibility of several port facilities in New York State through 2018 Ports Assessment*
- Advising as to the use of \$10 million to fund offshore wind workforce training from 2018 to 2025
 - Vocational training
 - Training facilities
 - Certification programs
 - Union training
 - Apprenticeship opportunities
 - Curriculum development

Studies and Research to Reduce Cost and Risk

New Studies and Analyses



Turbine Layouts and Spacing

- Provides information to support the siting and orientation of the Area for Consideration and Wind Energy Areas



Socio-economic Assessment of Shipping and Navigation

- Assesses the potential socio-economic impacts of re-routing commercial vessels around potential offshore wind farms



Inshore Feeder Barge

- Assesses the feasibility of using an inshore feeder barge system to augment the capacity of offshore wind staging ports in New York Harbor



Metocean

- Improve characterization of the wind, wave and ocean current environment
- Collect data on birds, bats, and marine mammals

+ New
Environmental
Research
Solicitation
in Fall 2018

Ongoing Studies and Analyses



Best Management Practices

- Collect fishing and environmental best management practices relating to pre-construction, operation, and decommissioning phases of offshore wind energy development



Digital Aerial Survey

- Collaborate with federal and State agencies, universities and scientists to collect baseline data
- Map seasonal patterns to assist the identification of important habitat areas & predict future areas of high use



Supply Chain

- Collaborate with industry to study how New York can best support the offshore wind supply chain
- Analyze technical challenges to envision a path forward for the broader U.S. industry

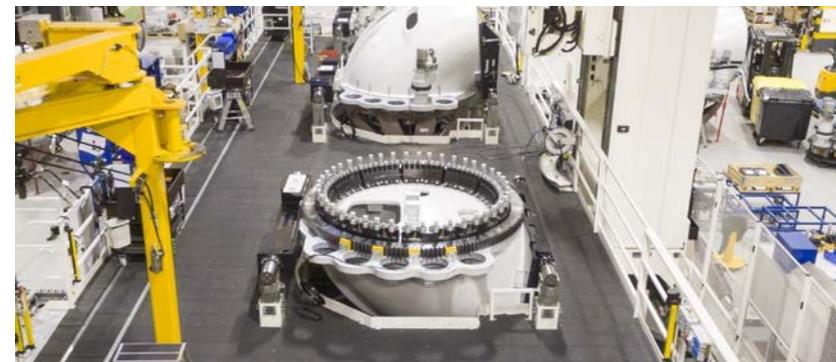


Ports Assessment

- Build upon the 2017 Ports Assessment to identify facilities with the greatest feasibility for offshore wind use

National Offshore Wind Research and Development Consortium

- The U.S. Department of Energy awarded NYSERDA a \$18.5 million grant to lead the National Offshore Wind Research and Development Consortium, which will:
 - Prioritize, support, and promote research and development activities that reduce cost and risk of offshore wind projects throughout the U.S.
 - Support U.S.-based manufacturing and supply chain
- Technical objectives:
 - Advance offshore wind plant technology
 - Develop innovative methods for wind power resource and site characterization
 - Develop advanced technology solutions for installation, operation and maintenance, and supply chain





Transmission and Interconnection

- Offshore wind transmission and interconnection options are being explored by various State agencies/partners:
 - The New York Power Authority is leading a study to:
 - Learn from European infrastructure design
 - Identify best practices in connecting wind-generated power to transmission networks and grid
 - Reduce delivery costs to customers and consumers
 - The Department of Public Service is exploring transmission options for a second phase of offshore wind development
 - Transmission Technical Conference on September 25
 - The New York Independent System Operator is requesting information for transmission needs driven by Public Policy Requirements
 - Responses due by September 30, 2018 to:
PublicPolicyPlanningMailbox@nyiso.com

Upcoming Events

Upcoming Offshore Wind Events

Long Island and New York City Public Information Meetings

- September 26
 - 6:30 p.m. - 8:00 p.m.
 - Long Beach City Hall, 1 West Chester Street, 6th Floor, Long Beach, NY 11561
- September 27
 - 7:30 p.m. - 9:00 p.m.
 - Peninsula Library, 92-25 Rockaway Beach Boulevard, Rockaway Beach, NY 11693

State of the Science Workshop

- November 13 – 14
 - 10:00 a.m. - 4:30 p.m.
 - The Inn at Fox Hollow, 7755 Jericho Turnpike, Woodbury, NY 11797

New York Offshore Wind Supplier Forum

- November 15
 - 9:00 a.m. - 5:00 p.m. (tentative)
 - The Roosevelt Hotel, 45 East 45th Street, New York, NY 10017





Questions?

Contact Us:

Website: nyserderda.ny.gov/offshorewind

Email: offshorewind@nyserderda.ny.gov



NYSERDA